

REMARKS

Entry of this supplemental amendment is requested by complying with 37 CFR 1.111(a)(2), for example, (A) (cancellation of a claim), (B) (adoption of the examiner suggestion(s); (F) (simplification of issues).

The Office Action mailed February 6, 2009 noted that claims 67-69, 71-76, 78-89, 91-102 and 104-110 were pending, and rejected all claims. The rejections are traversed below.

Status of Claims

Claims 67, 75, 79 and 84 have been further amended, claims 88, 89, 92, 93, 101, 107 and 110-144 have been further cancelled, new claims 145-153 have been further added and, thus, in view of the forgoing claims 67, 75, 79, 84, 94, 109 and 145-153 remain pending for consideration which is requested. No new matter has been added.

101 Rejection

As discussed in the prior filed Amendment, the Office Action rejected various claims under 35 U.S.C. section 101 as non-statutory. The claims have been amended in consideration of the Action comments and it is submitted they satisfy the requirements of the statute. Withdrawal of the rejection is requested.

Rejections

The Action rejected all pending claims variously over Cozza and Arnold.

As discussed in the prior filed Amendment, claims 67, 75, 79, 84, 94 and 109 have been amended to emphasize that the infected/quarantined file is converted into encoded data "by executing an encoding process that converts an infected file in an infected condition into another encoded data when the infected file is detected" (emphasis added). That is, the infected file is converted.

As discussed in the prior filed Amendment, Cozza discusses storing initial state information about a file in a cache of a non-volatile storage medium. Later, when the file is subsequently scanned, the current state information is compared with the initial state information and if they differ the file is then scanned for viruses. Cozza has not been shown to teach or suggest converting an infected file into another encoded data.

As discussed in the prior filed Amendment, Arnold periodically monitors a data processing system for anomalous behavior that may indicate an infection by a virus, worm, etc. and

automatically scans for undesirable software using a signature. Arnold calls for a human to create the signature by converting the binary machine code of a virus into assembler code and picking a part of the virus code as the signature. In particular, Arnold states:

A widely-used method for the detection of computer viruses is known as a virus scanner. A virus scanner employs short strings of bytes to identify particular viruses in executable files, boot records, or memory. The byte strings (referred to as signatures) for a particular virus must be chosen with care such that they always discover the virus, if it is present, but seldom give a "false alarm", known as a false positive. That is, the signature must be chosen so that the byte string is one that is unlikely to be found in programs that are normally executed on the computer. Typically, a human expert makes this choice by converting the binary machine code of the virus to an assembler version, analyzing the assembler code, selecting sections of code that appear to be unusual or virus-like, and identifying the corresponding bytes in the binary machine code so as to produce the signature. Wildcard bytes can be included within the signature to provide a match with any code byte appearing in a virus.

(See Arnold, col. 1, lines 45-63)

As can be seen, Arnold discusses converting a part of the virus code to a human recognizable assembler for producing a signature. Whereas claims 67, 75, 79, 84, 94 and 109 call for converting "an infected file" into another encoded data. Withdrawal of the rejection is requested.

New Claims

New claims 145-153 have been added.

Regarding independent claim 145, Cozza and Arnold fail to disclose "converting the virus-infected file into encoded virus-infected data".

The dependent claims 146-153 depend from the above-discussed independent claim 145 and are patentable over the prior art for the reasons discussed above. The dependent claims also recite additional features not shown to be taught or suggested by the prior art. For example, claim 146 calls for converting the virus infected file back to the original ("executing inverse conversion of said encoded virus-infected data for restoring the virus-infected file"). It has not been shown that Arnold and/or Cozza teach or suggest such. It is submitted that the dependent claims are independently patentable over the prior art.

Support For New Claims

The support for new claims 145-153 can be found throughout the Specification and Figures. One particular example of where support can be found variously for the new claims in figure 2 and the accompanying description in columns 7-10, in figures 10-12 and the accompanying description in columns 12-13, in figure 21 and the accompanying description in

column 19, in figure 15 and the accompanying description in columns 14-15, and in figure 22 and the accompanying description in columns 19 and 20.

Conclusion


There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,
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